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**SOCIETY OF U.S. AIR FORCE  
FLIGHT SURGEONS' 2010 STATE  
OF THE FLIGHT SURGEON  
SURVEY:  
THE MEDICAL TREATMENT  
FACILITY COMMANDER'S  
PERSPECTIVE**



**Theresa B. Goodman, Maj, USAF, MC, FS**

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**Air Force Research Laboratory  
711<sup>th</sup> Human Performance Wing  
School of Aerospace Medicine  
Graduate Medical Education  
2601 Louis Bauer Drive  
Brooks City-Base, TX 78235-5130**

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DAVID B. RHODES, Col, USAF, MC  
Program Director, Aerospace Medicine

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ROBERT E. CARROLL, Col, USAF, MC, CFS  
Chair, Aerospace Medicine Department

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## 1.0 EXECUTIVE SUMMARY

In May 2003, the U.S. Air Force Surgeon General (SG) called upon the Society of U.S. Air Force Flight Surgeons to report on the state of the flight surgeon from a perspective external to the traditional chain of command. This survey is the third inquiry aimed at garnering the opinion of medical treatment facility (MTF) commanders on the quality of today's flight surgeons, the level of training of new flight surgeons, and the level of preparation of aerospace medicine specialists who graduate from the Residency in Aerospace Medicine.

MTF commanders were surveyed using a commercial web-based survey tool with a 76% response rate. Data were compared against the previous two surveys (completed in 2005 and 2007) to determine if differences were present across the survey series.

In terms of overall satisfaction with base-level flight surgeons (FSs), the majority of commanders are satisfied (69.4%); however, comparison to the previous two studies shows a decrease in the percent with a favorable rating (although not statistically significant). Careful analysis of the dissatisfied responses reveals that the quality of physicians is quite good, but the inexperience of newer FSs combined with inadequate mentorship and decreased manning accounted for 68.4% of the negative responses. When compared to the 2007 survey, Medical Group commanders (MDG/CCs) view oversight as significantly improved in public health, bioenvironmental engineering, and optometry programs. This year's survey also showed an improved opinion of oversight in health promotions, occupational medicine, and flight medicine programs, but this was not statistically significant. Overwhelmingly, MDG/CCs prefer a lieutenant colonel in the role of Chief of Aerospace Medicine (SGP) (77.4%) and feel that the Aerospace Medicine Squadron commander (AMDS/CC) position should be filled by a lieutenant colonel (83.9%) as well. These data were not substantially different from the two previous studies. The most desired area for improvement of flight surgeons was in leadership/mentorship at 65.6% (40/61) of responses. The second most desired improvement, 41% (25/61), was in the level of MTF cooperation/participation.

It does appear that commanders are more concerned with the level of training out of the Aerospace Medicine Primary (AMP) Course, with a positive response being gathered only 47.5% (29/61) of the time as compared to 76% in 2005 and 81.6% in 2007. These data are tempered by the comments given by the 32.8% (20/61) of commanders who responded negatively. Of these 20 negative responses, 60% (12/20) reported that the AMP is actually a good start, but that serving as a flight surgeon requires mentoring or "growing" of the AMP graduates for at least the first 6 months to 1 year. Additionally, 20% (4/20) of the negative responses also said that the AMP is a good start, but that an individual's lack of experience in the Air Force or in clinic places him/her behind other physicians. Only 10% (2/20) of negative responses were directly related to dissatisfaction with the AMP Course itself. When asked about the newest AMP graduates, MDG/CCs seemed relatively satisfied, with approval percentages of 3.3% "excellent," 45.9% "good," and 44.3% "adequate." Only 6.5% of MDG/CCs reported overall performance of new graduates as being marginal or poor. The top subject commanders wanted the AMP Course to emphasize was aerospace medicine programs, with 44.3% (27/61) response. The second most prevalent emphasis item was medical standards at 39.3% (24/61). Other well-represented subject emphasis items (in descending order) were the Personal Reliability Program (PRP) at 24.6%, officership/leadership (23%), and clinical aviation medicine (16.4%).

The overwhelming desired focus of the Residency in Aerospace Medicine (RAM) for future job training was for the SGP role at 88.3% of MDG/CCs. Squadron/CC was the second most prevalent choice at 51.7%. This compares quite closely with the 2005 emphasis and diminishes the emphasis on Flight/CC preparation, which was a more frequent response in 2007. Commanders agree that the RAM is preparing the residents for SGP responsibilities. However, they also agree that the RAM is not preparing RAM graduates to assume the Sq/CC role. In the 2010 survey, of the 60% that responded negatively to preparation for Sq/CC, the majority (63.9%) reported that they did not see the connection between the residency and Sq/CC or they did not have the expectation that a residency would prepare a flight surgeon for the responsibilities of squadron command; however, 19.4% (7/36) of these same negative responders had fundamental concerns with the lack of leadership/officership displayed by the RAM graduates with whom they had contact. The top subject commanders wanted the RAM to emphasize was clinical aviation medicine at 38.3% (23/60) of responses. The second most prevalent emphasis item was a tie between the Master of Public Health degree (or equivalent), leadership seminars, and occupational medicine at 28.3% (17/60) each. The 2007 RAM subject emphasis priorities were leadership and aerospace medicine program management. The 2005 most cited items were leadership and occupational medicine.

Overall, MTF commanders appear to approve of flight surgeon oversight of aerospace medicine programs, the Aerospace Medicine Primary Course, and the Residency in Aerospace Medicine training program. Negative opinions about the level of training or satisfaction with flight surgeons in general were overwhelmingly due to lack of experience, inadequate manning, and/or lack of base-level mentorship. These results may indicate a frustration with the level of manning and an inability to resource time to provide necessary “on-the-job” training in the first years out of the AMP. This survey provides a snapshot of the current opinion of MDG/CCs on the quality of flight surgeons in the USAF as well as the level of preparation of flight surgeons in AF training programs.

Caution should be used in making large-scale curriculum changes based on the results of one study, as it is only sampling one of the three main stakeholders (the others being flight surgeons and the line units that the flight surgeons support). Per USAF Surgeon General’s direction, future “State of the Flight Surgeon” surveys will be consolidated for all three stakeholders and presented once every SG cycle. This new format of the survey may give a more complete picture of the state of the flight surgeon.

## **2.0 INTRODUCTION**

In 2003, Lieutenant General George “Peach” Taylor called upon the Society of U.S. Air Force Flight Surgeons (SoUSAFFS) to provide annual feedback regarding the state of the flight surgeon (Ref 1). Since that challenge, SoUSAFFS has provided this information through a survey of key stakeholders in the flight surgeon’s life cycle. These stakeholders have been identified as (1) active duty flight surgeons, (2) medical treatment facility (MTF) commanders, and (3) line commanders (both Operations Group and Flying Squadron commanders). Feedback solicited from these stakeholders has ranged from individual job satisfaction to overall flight surgeon support of the MTF and Wing mission. The results of previous years’ surveys have been used to direct changes in the Aerospace Medicine Primary (AMP) Course and the Residency in Aerospace Medicine (RAM) to attempt to train flight surgeons to the level of the field’s expectation.



Each year, the survey has rotated among one of the three above stakeholders, and this year the focus returned to the MTF commander. The commanders have been surveyed twice before this current study, and results of those surveys have fueled significant changes to the AMP and RAM curriculum (e.g., increasing the robustness of training to produce a full-fledged flight surgeon right out of the AMP).

Recently, flight surgeon manning has decreased, and in response to this personnel shortage, the AMP has been revised again. Spring 2010 unveiled the latest version of the AMP, which is trying to expedite delivery of new flight surgeons to the field and rely on the first year out of the AMP to act as a mentorship/training year specific to the major command (MAJCOM) of assignment.

The Air Force Residency in Aerospace Medicine has many goals: (1) to train physicians in the unique aspects of aviation and space medicine to a level of competency that will allow each resident to sit for and pass the Aerospace Medicine Board Certification, (2) to produce a competent Chief of Aerospace Medicine (SGP), and (3) to enrich the management and leadership skills required of a squadron commander. From previous surveys, MTF commanders desire strong SGPs, squadron commanders, and Residents in Aerospace Medicine willing to be “team players” (Poole RD, Ward AE. Personal communication; May 2007). Curriculum changes have been made to the RAM, in the past, to increase the emphasis on these AF specific roles.

The 2010 State of the Flight Surgeon Survey of the MTF commanders (MTF/CCs) will analyze the satisfaction of commanders with the current product of the AMP and RAM programs. It will also attempt to gain insight into the areas where training could be improved. Finally, these survey results will be considered for changes in future flight surgeon training as well as manning requirements and potentially even policy regarding flight surgeon competency.

### **3.0 METHODS**

The previous two MTF/CC surveys were reviewed and, for the sake of comparison and trend analysis, the majority of questions were replicated in this survey with only grammatical changes. Questions retained from the 2005 and 2007 surveys were related to demographic information, flight surgeon performance, and flight surgeon training. On opinion-based questions, the Likert scale was adjusted from previous surveys from a three-point scale to a five-point scale to increase the sensitivity of responses (Ref 2). To compare this new expanded scale with the previous studies, the top two and bottom two responses were grouped in the data analysis step to represent a three-point scale. Future studies will hopefully continue the five-point scale, allowing for more sensitive trend analysis.

Many questions that were “open-ended” in the past survey were changed to multiple choice “pick lists” to educate respondents on the current curriculum of the AMP and RAM programs and also to allow for more robust future analysis of these results. Respondents were allowed to choose “other” as a choice in these questions and, when appropriate, add an “open-ended” comment if the “pick list” did not represent his/her choice (Appendix A).

An Institutional Review Board (IRB) exemption was requested from the Wright-Patterson IRB, but because the survey was for the purposes of program evaluation and internal policy changes, the survey was deemed to “not constitute human-use research”; therefore, IRB exemption was not required (Appendix B). Additionally, a survey control number (SCN) was obtained through the AF Survey Office. The SCN for this study was DAFSG3PF-048.

The survey was distributed via a commercially available survey tool, SurveyMonkey® (Survey Monkey, Palo Alto, CA). The survey was tested by the author on fellow flight surgeons and staff at the USAF School of Aerospace Medicine to ensure questions were understandable, legible, and complete. After incorporating the feedback from the test round, the commercial survey tool emailed each active duty Air Force MTF commander (n=82) a randomly generated access link to complete the web-based survey. The survey tool allowed for the anonymous collection of data but targeted follow-up reminders to nonresponders (Ref 3).

Data were analyzed using a combination of Excel® (Microsoft, Redmond, WA) and SAS® (SAS, Cary, NC) statistical packages. Regression was used to determine if there were differences in responses based on the corps type of the commander and also the percent manning of the facility. Because the comparison data were limited to percent of responses and a three-way test of proportions is not a standard test statistic, confidence intervals were determined for each of the year's responses and depicted in the bar charts as error bars. The intention was to suggest significance if error bars failed to overlap. However, p-values were not able to be obtained across the three studies.

## 4.0 RESULTS

The study was open for response from 6-20 April 2010. Eighty-two commanders were asked to participate in the study after being identified by their respective MAJCOM SGPs. Of the 82 invitations to participate, 62 commanders completed the survey, for a response rate of 75.6%.

### 4.1 Demographics

Survey participants command 4 medical centers, 6 hospitals, and 52 clinics. This compares similarly with 2005 and 2007, with a notable trend toward increasing clinic prevalence over the surveillance period (Fig. 1).

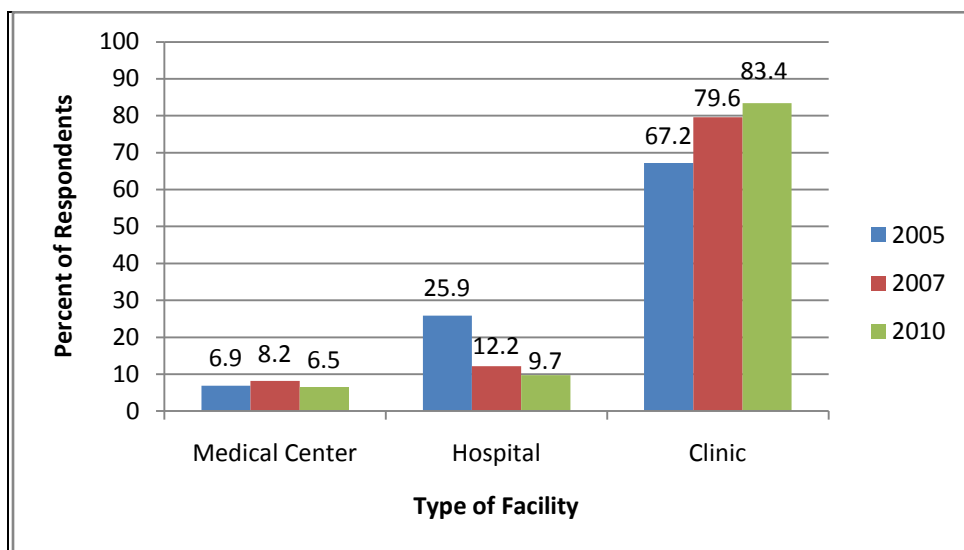
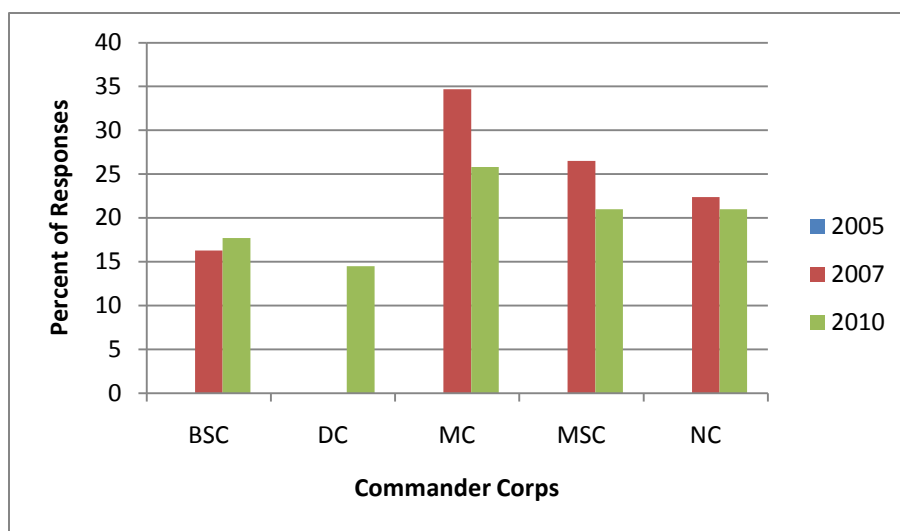


Figure 1. Type of Medical Facility Commanded

Medical Group commanders are selected from five primary medical officer corps: the Biomedical Science Corps (BSC), Dental Corps (DC), Medical Corps (MC), Medical Service Corps (MSC), and Nurse Corps (NC). The 2010 survey had good representation of all five of these corps (as compared to the Air Force Medical Service Flight Path Group Commander Requirements List) (*AFMS Flight Path, Attachment 1 (Medical Wing)*, 28 May 2009 published only on a secure web site; available to those with access at <https://kx.afms.mil/kxweb/dotmil/kj.do?functionalArea=FlightPath&iPlanetDirectoryPro=AQIC5wM2LY4SfexsDnb2dPfy1OqOU49QDQZmTwtBNXyF%2Bfw%3D%40AAJTSQACMDE%3D%23>). It is unknown what the corps breakdown was for the 2005 survey, but 2010 data compare well with 2007, with the exception of the 2010 survey collecting responses from DC commanders (Fig. 2). For the 2010 data, regression analysis conditioned upon corps type was performed and revealed no significant difference in study responses based on the commander's corps background.



**Figure 2. Commander Corps Breakdown for 2007 and 2010 Surveys (2005 Data Not Recorded)**

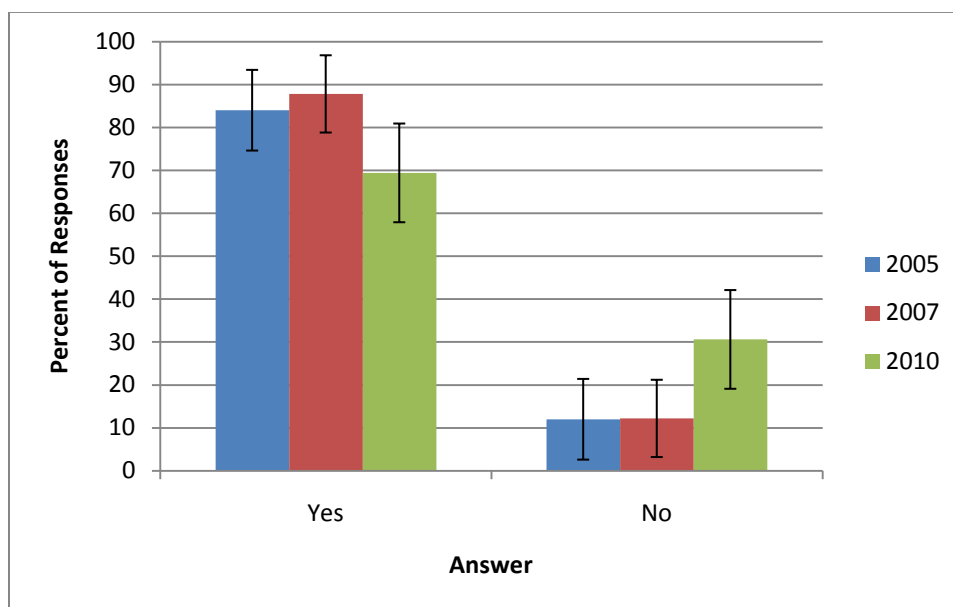
In light of flight surgeon manning concerns expressed by the Air Force Medical Service (AFMS), a new question was added to this year's survey that requested commanders to provide the number of flight surgeons authorized for their MTF as well as the actual number of flight surgeons assigned. Based on these questions, an average percent manning for MTFs was calculated at 80.9%, with a minimum of 33% and a maximum of 200% (this includes 16 MTFs reporting 100% manning and 3 MTFs reporting 133%, 150%, and 200% manning, respectively). Regression analysis conditioned upon percent manning was performed and revealed no significant difference in study responses based on lack of manning (this includes regression after removing data from MTFs reporting  $\geq 100\%$  manning).

The survey showed 45.2% (28/62) of commanders completed an area of responsibility (AOR) deployment, while 40.3% (25/62) completed the Commander's Orientation to Aerospace Medicine Course. Also, 29% (18/62) of respondents reported attending the AMP Course (although only 16 of the 62 were likely qualified to do so, potentially jeopardizing this question's validity), 21% (13/62) reported completing a flight surgeon assignment, and 16.1% (10/62) completed the RAM. According to those surveyed, 40.3% (25/62) of their Aerospace Medicine

Squadron commanders (AMDS/CCs) and 72.6% (45/62) of their SGPs were RAM graduates. This is slightly less than the response in 2007 at 56.2% and 81.6%, respectively (2005 data not fully available). Of note, however, 19.4% (12/62) of commanders reported that they had a RAM graduate filling a position other than the above. These positions included four Medical Group (MDG) commanders, two MDG deputy commanders, a Chief of the Medical Staff (SGH), and a Medical Operations Squadron commander (MDOS/CC).

## 4.2 Opinion on Flight Surgeon Quality and Skill

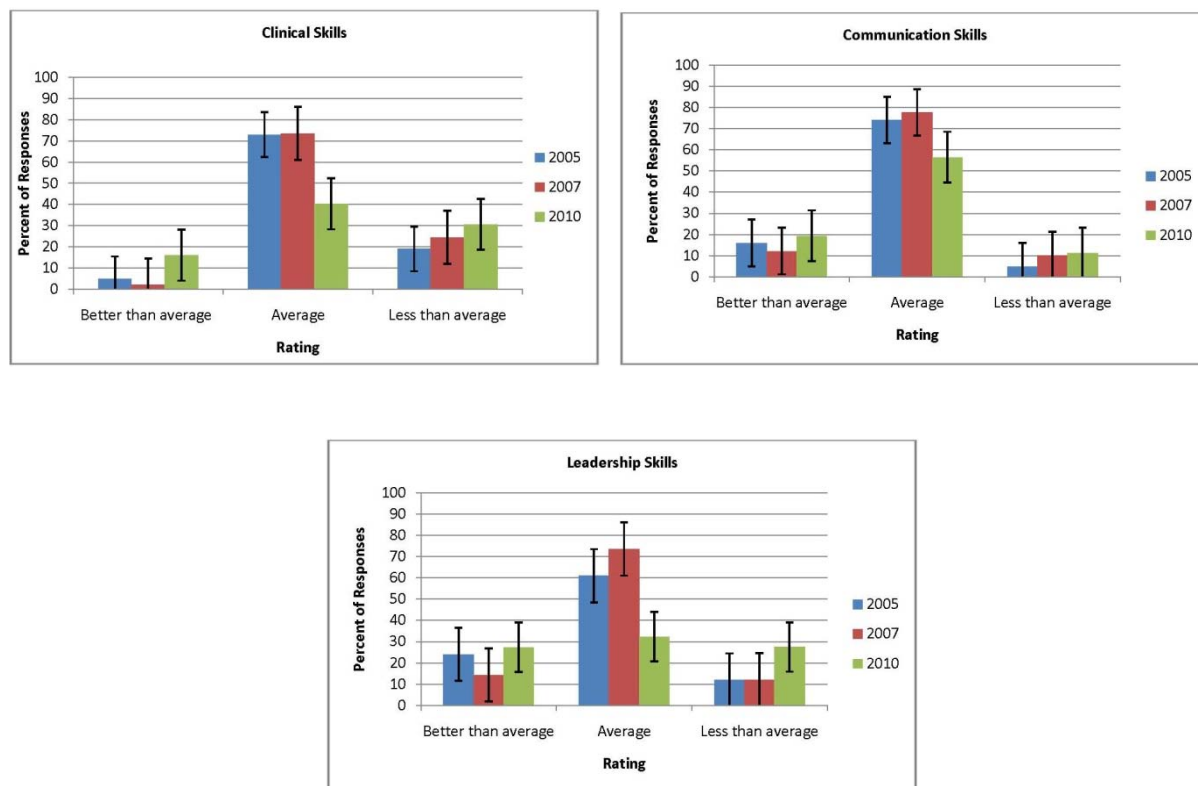
To gauge the overall satisfaction of MTF/CCs with flight surgeons, survey participants were asked if flight surgeons at the MTF fulfilled expectations. As shown in Figure 3, 69.4% of commanders affirmed that their flight surgeons fulfilled expectations. Negative responses to this question required open-ended input as to the reason behind dissatisfaction. Reasons for dissatisfaction in the 19 negative responses included flight surgeon (FS) inexperience (9/19), inadequate manning (4/19), and poor performance (4/19). If analyzed alone, poor performance accounts for only 6.4% (4/62) of the overall impression of FSs, whereas relatively uncontrollable factors such as inexperience and manning account for 21% (13/62) of the overall satisfaction or dissatisfaction level. A comparison with the previous two surveys reveals a downward trend in satisfaction with FSs, but data are unavailable to compare the reasons for this dissatisfaction.



**Figure 3. Do Flight Surgeons Fulfill Expectations of MDG/CCs?**

MDG commanders were surveyed on their overall opinion of clinical, communication, and leadership skills within three different categories: FSs not in SGP or Sq/CC duties (Fig. 4), RAM graduates (Fig. 5), and FSs that are either SGP and/or Sq/CC (Fig. 6). Figure 4 appears to show that there has been a trend away from an “average” rating in clinical and leadership skill, with a corresponding increase in both “better than average” and “less than average” ratings. Although the 95% confidence interval (CI) bars indicate that the change is significant away from

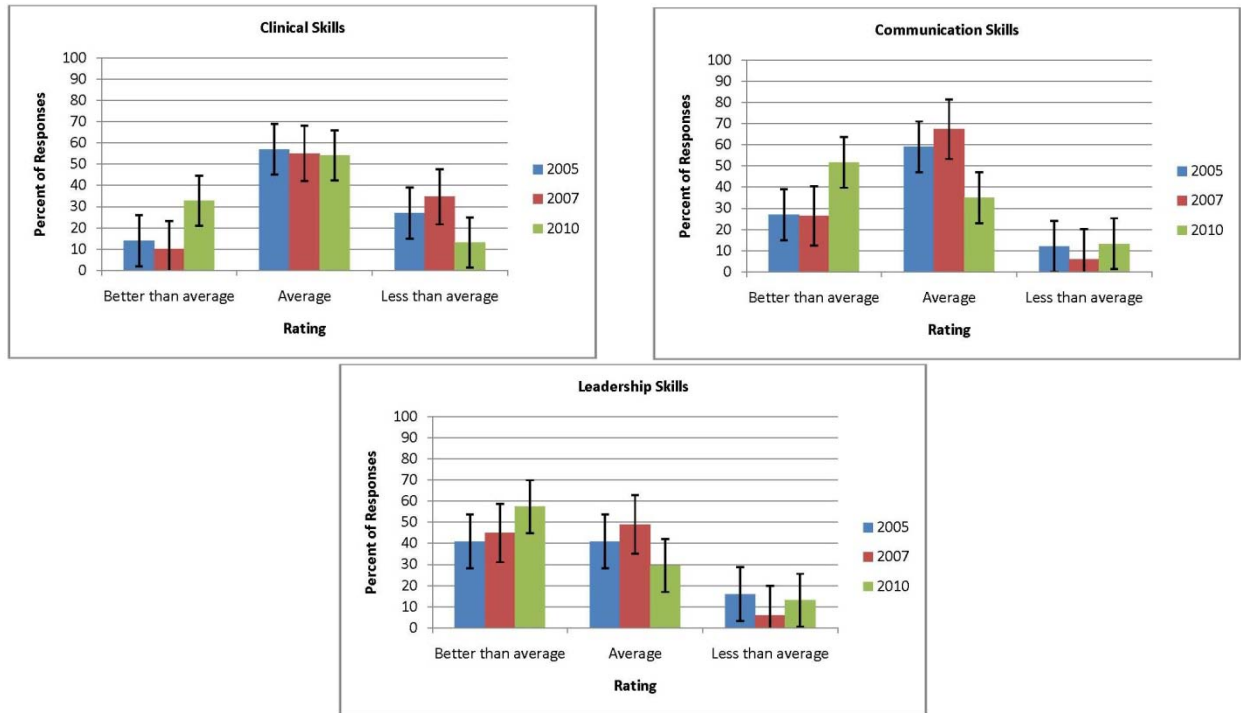
average, the corresponding CIs overlap in the other categories. Therefore, the author concluded that there was likely no significant difference in opinion of the clinical or leadership skills of the FSs. Review of this same group's skills in communication revealed no significant difference between the survey years.



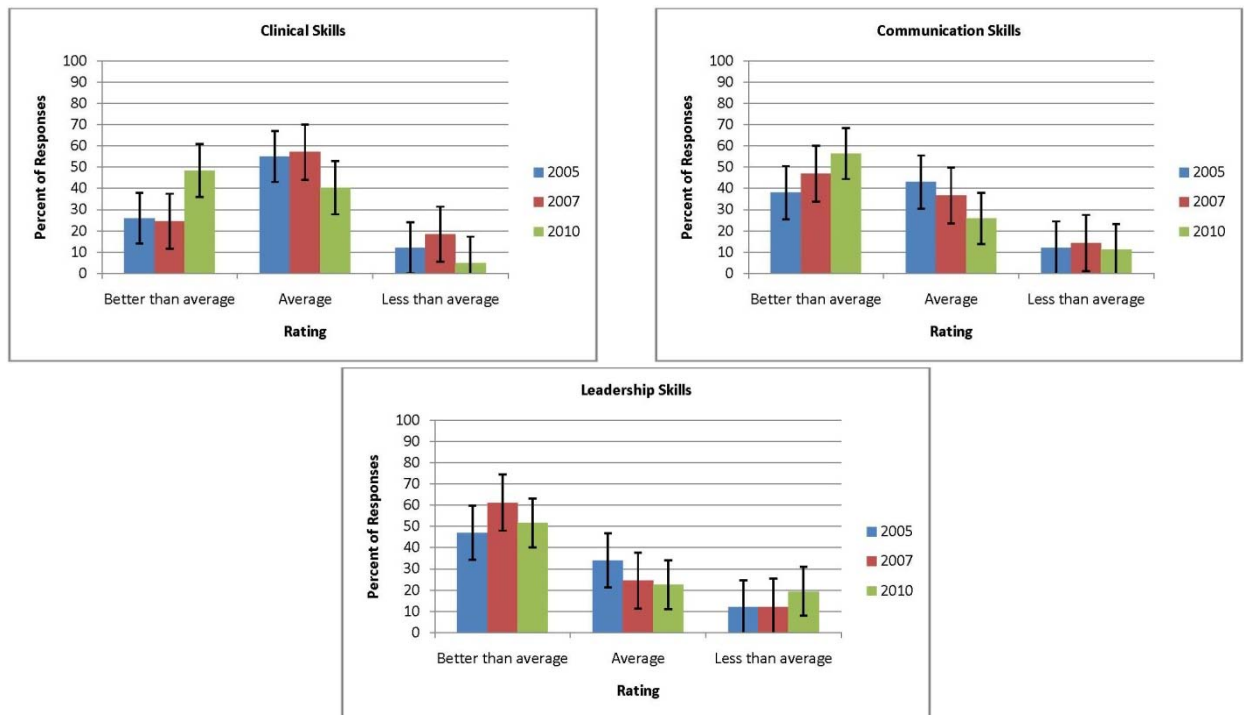
**Figure 4. MDG/CCs' Opinion of Clinical, Communication, and Leadership Skills of Non-SGP or Sq/CC Flight Surgeons**

Figure 5 demonstrates no significant difference in opinion of the clinical skills of RAM graduates, which remain “average,” but does show a consistent trend of “better than average” communication skills (as evidenced by the nonoverlapping CI bars in this category). Leadership skills continued to be viewed as, overall, “better than average” than the typical MDG physician but did not appear to significantly change from previous years.

Flight surgeons who are in key leadership positions were also rated by MDG/CCs in regard to their skills compared to the typical MDG physician (Fig. 6). The 2010 survey indicates that these FSs' clinical skills are “better than average,” but given the slight overlap of CI, this cannot be interpreted as statistically significant. Communication skills maintained a positive upward trend this year, and leadership skills continue to be viewed as “better than average” as well. CIs for all 3 years overlap, so there is no statistically different opinion of these physicians' skills.

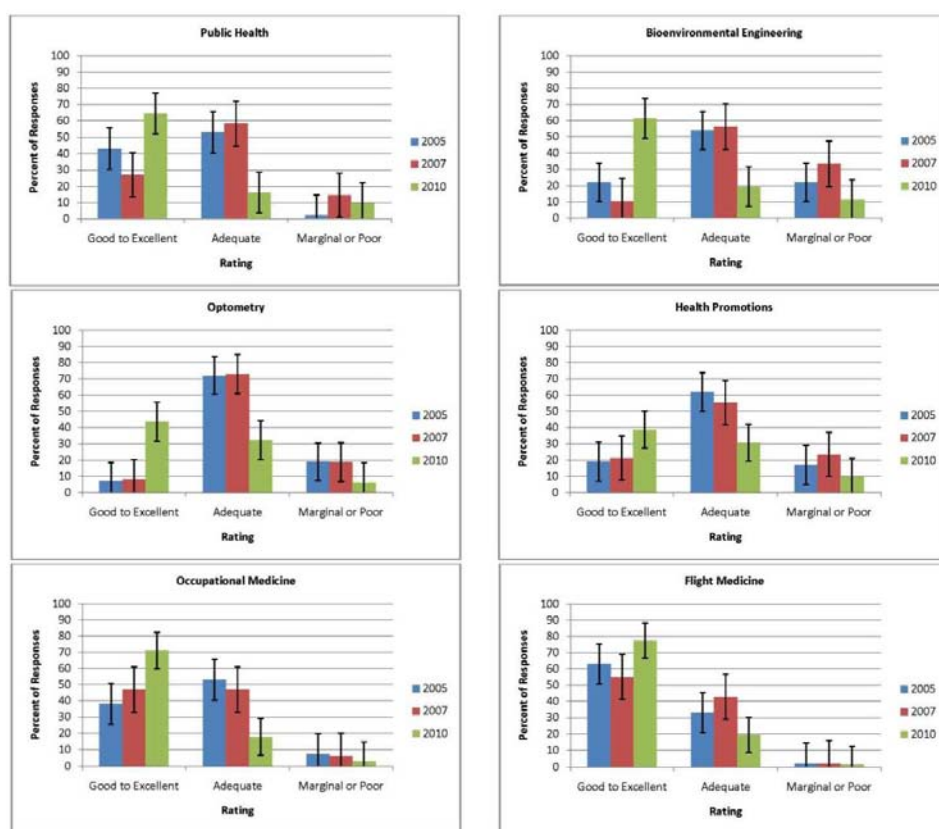


**Figure 5. MDG/CCs' Opinion of Clinical, Communication, and Leadership Skills of RAM Graduates**



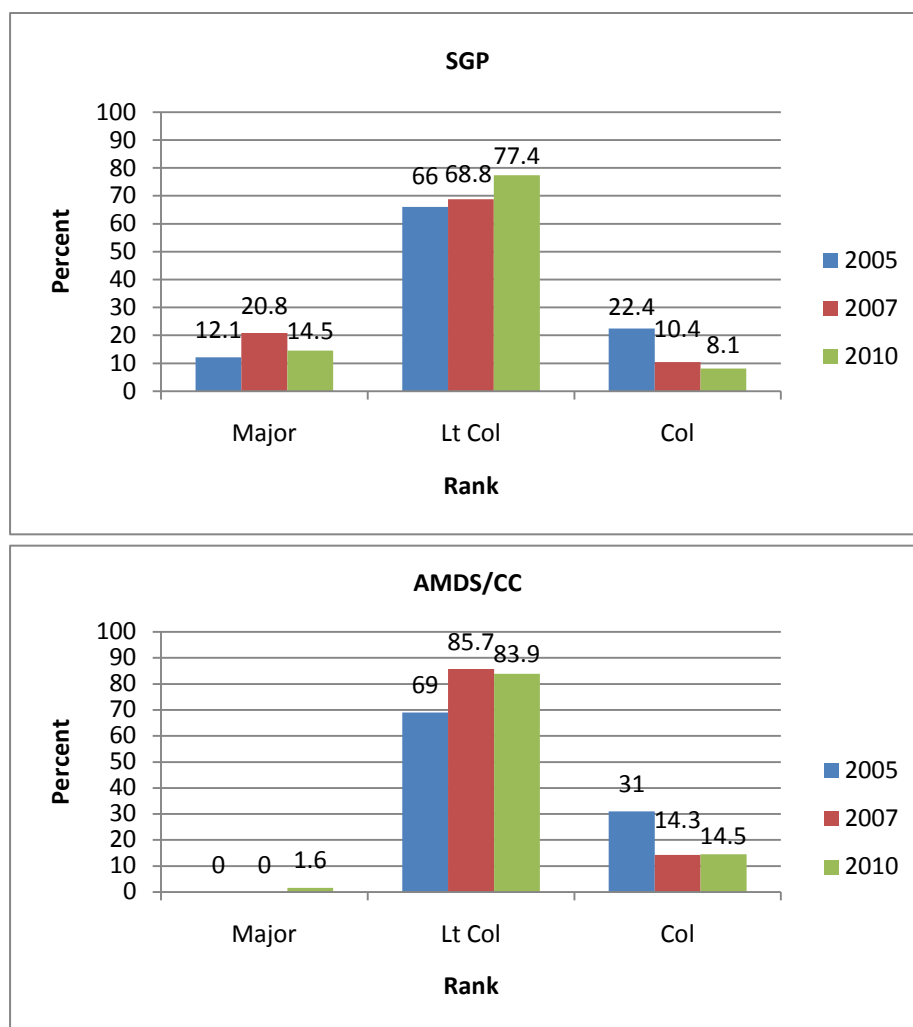
**Figure 6. MDG/CCs' Opinion of Clinical, Communication, and Leadership Skills of SGP or Sq/CC Flight Surgeons**

The MDG/CCs were asked to evaluate their FSs' oversight ability of major aerospace medicine programs (Fig. 7). When compared to the 2007 survey, MDG/CCs view oversight as significantly improved in public health, bioenvironmental engineering, and optometry programs (as determined by the nonoverlapping confidence intervals). This year's survey also showed an improved opinion of oversight in health promotions, occupational medicine, and flight medicine programs, but the CIs had a small amount of overlap, so an inference of significance could not be made. Two other programs were evaluated as well, readiness and immunizations; however, there was a large percentage of "nonapplicable" answers in the 2010 survey, making the data impossible to compare. This is likely due to the AFMS policy change, which removed these two programs from Aerospace Medicine Squadrons. Although there is still significant overlap of flight surgeons with these two programs, it is postulated that MDG/CCs interpreted these questions as not applying in oversight.



**Figure 7. Flight Surgeon Ability to Provide Effective Oversight of Major Aerospace Medicine Programs**

The commanders were queried about their opinion of the appropriate rank for the SGP and AMDS squadron commander roles. Overwhelmingly, MDG/CCs prefer a lieutenant colonel in the role of the SGP (77.4%) and feel that the AMDS/CC role should be filled by a lieutenant colonel (83.9%) as well (Fig. 8). These data were not substantially different from the two previous studies.



**Figure 8. Appropriate Rank for the SGP and AMDS Squadron Commander Roles**

In the previous two surveys, MDG/CCs were asked the open-ended question, “What are the top two areas where flight surgeons need to improve?” The responses were grouped into categories (after the fact) and then reported. This year, the categories were given as options for selection and then an additional option of “other” was offered to incorporate overlooked areas. The six categories to choose from were knowledge of aerospace medicine programs, level of MTF participation, flight line response, patient care, flying squadron/operation/wing engagement, and leadership/mentorship. The most desired area for improvement was in leadership/mentorship at 65.6% (40/61) of responses. The second most desired improvement, 41% (25/61), was in the level of MTF cooperation/participation. The consistent thread from 2005, 2007, and now 2010 was a desire for increased MTF cooperation/participation. This was one of the top two categories in all three survey years. In 2005, the most frequently cited area for improvement was in clinical skill (as compared to 14.8% or 9/61 responses in 2010), while in 2007 the most frequently cited area was improving the knowledge level of aerospace medicine programs (as compared to 29.5% or 18/61 responses in 2010). Ten of the 61 responses listed “other” as one of the two main areas for improvement. The most common of these was manning



issues (4/10), followed by inexperience of flight surgeons (3/10). A complete list of the “other” comments is provided in Appendix C.

Finally, MDG/CCs were asked how they would describe the relationship the flight surgeons have with aircrew and “special operational duty” (defined as firefighters, air traffic controllers, etc.) personnel. On a five-point scale ranging from poor to excellent, commanders felt that these relationships are excellent (77% gave an excellent rating for aircrew relationship and 67.8% gave an excellent rating for special operational duty personnel). This question was new for the 2010 survey so there is no comparison to previous studies.

### 4.3 Opinion of Flight Surgeon Training Programs

**4.3.1 Aerospace Medicine Primary Course.** The commanders were asked a series of questions aimed at capturing an opinion of the USAF training program for flight surgeons known as the Aerospace Medicine Primary Course. First, the MDG/CCs were asked if the AMP Course adequately prepares physicians to serve as flight surgeons (Fig. 9). Options for answering this question were “yes,” “no,” and “don’t know.” If the respondent answered “no,” he/she was required to comment on why the AMP did not adequately prepare physicians for this job. This question was altered slightly from the previous surveys by adding a “don’t know” response as well as requiring a comment for a “no” answer. Therefore, a statistical comparison of significance cannot be made across the three surveys. However, it does appear that commanders are more concerned with the level of training out of the AMP, with a favorable opinion being gathered only 47.5% (29/61) of the time as compared to 76% in 2005 and 81.6% in 2007. These data are tempered by the comments given by the 32.8% (20/61) of commanders who responded that the AMP is not adequately preparing physicians. Of these 20 negative responses, 60% (12/20) reported that the AMP is actually a good start but that serving as a FS requires mentoring or “growing” of the AMP graduates for at least the first 6 months to 1 year. Additionally, 20% (4/20) of the negative responses also said that the AMP is a good start but that the individual’s lack of experience in the Air Force or in clinic places him/her behind other physicians. Only 10% (2/20) of negative responses were directly related to dissatisfaction with the AMP Course itself.

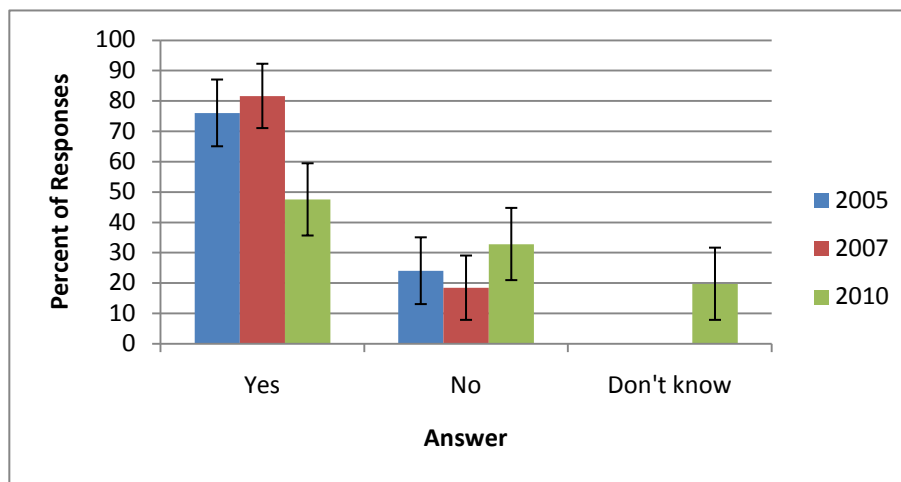


Figure 9. Does the Aerospace Medicine Primary Course Adequately Prepare Flight Surgeons?

To further understand the commanders' opinion of the AMP Course, they were asked to characterize (via five-point Likert scale) the performance by newly graduated (within 1 year) AMP graduates. This was a new question added to the 2010 survey. If a response was graded as marginal or poor, the commander was asked to comment. MDG/CCs seemed relatively satisfied with the new FSs. The breakdown of responses was 3.3% "excellent," 45.9% "good," and 44.3% "adequate." Only 6.5% of MDG/CCs reported overall performance as being marginal or poor. Comments pertaining to this question are in Appendix C but were not easily broken down to categories.

Finally, the MDG/CCs were asked to review the new AMP curriculum and choose the two subject areas that should be emphasized. An "other" category allowed for comment if the commander felt that the subject was not represented in the pick list. The top subject commanders wanted emphasized was aerospace medicine programs, with 44.3% (27/61) response. The second most prevalent emphasis item was medical standards at 39.3% (24/61). Other well-represented subject emphasis items (in descending order) were the Personal Reliability Program (PRP) at 24.6%, officership/leadership (23%), clinical aviation medicine (16.4%), other (14.8%), and emergency response (13.1%). The "other" category reflected combinations of the above categories. In 2007, the most frequently cited emphasis items were flight medicine administration and occupational medicine. The 2005 most cited item was medical/fitness standards. In comparison, occupational medicine only accounted for 4.9% of the 2010 emphasis concerns. A verbatim list of the "other" responses is listed in Appendix C.

**4.3.2 Residency in Aerospace Medicine.** Medical Group commanders were queried on their opinion of the Residency in Aerospace Medicine training program. First, they were asked what job level the RAM program should focus on for job preparation. Commanders were presented with a "pick-list" that included Flight Medicine Flight commander, Group/MTF SGP, Aerospace Medicine Squadron commander, or other (participants could pick all that apply). The overwhelming focus for future job training was for the SGP role at 88.3% of MDG/CCs. Squadron/CC was the second most prevalent choice at 51.7%. This compares quite closely with the 2005 emphasis and diminishes the emphasis on Flight/CC preparation, which was a more frequent response in 2007 (Fig. 10).

The follow-up questions to future job preparation asked if the MDG/CCs felt the RAM actually prepared FSs for SGP and Sq/CC (Fig. 11). Similar to 2005 and 2007 data, commanders appear to agree that the RAM is preparing the residents for SGP responsibilities. However, they also agree that the RAM does not prepare RAM graduates to assume the Sq/CC role. In the 2010 survey, of the 60% that responded negatively to preparation for Sq/CC, the majority (63.9%) reported that they did not see the connection between the residency and Sq/CC or they did not have the expectation that a residency would prepare a flight surgeon for the responsibilities of squadron command; however, 19.4% of these same negative responders had fundamental concerns with the lack of leadership/officership displayed by the RAM graduates with whom they had contact. The verbatim responses are listed in Appendix C.

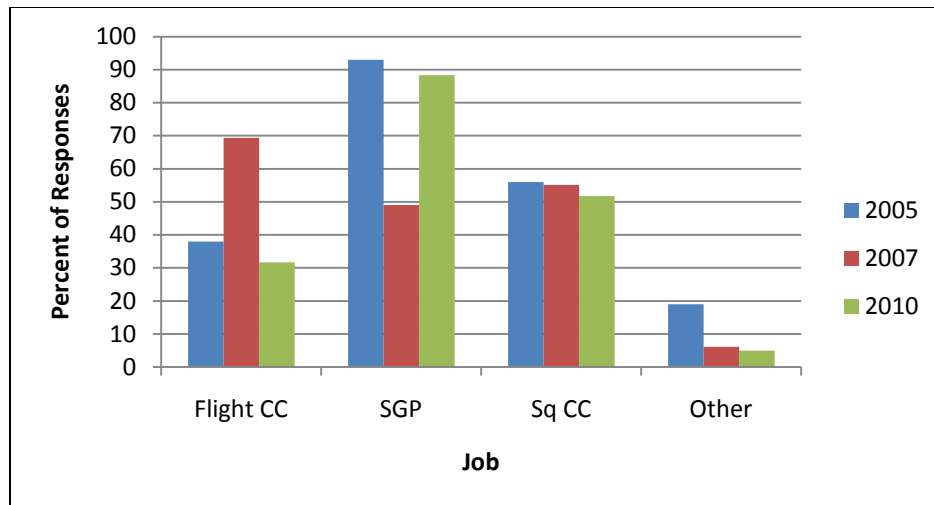


Figure 10. The RAM Program Should Focus on Preparing Graduates for Which Job?

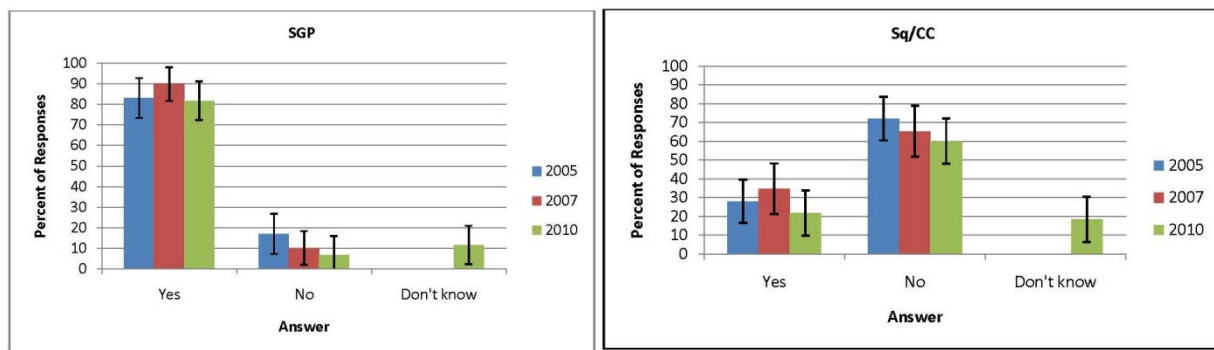
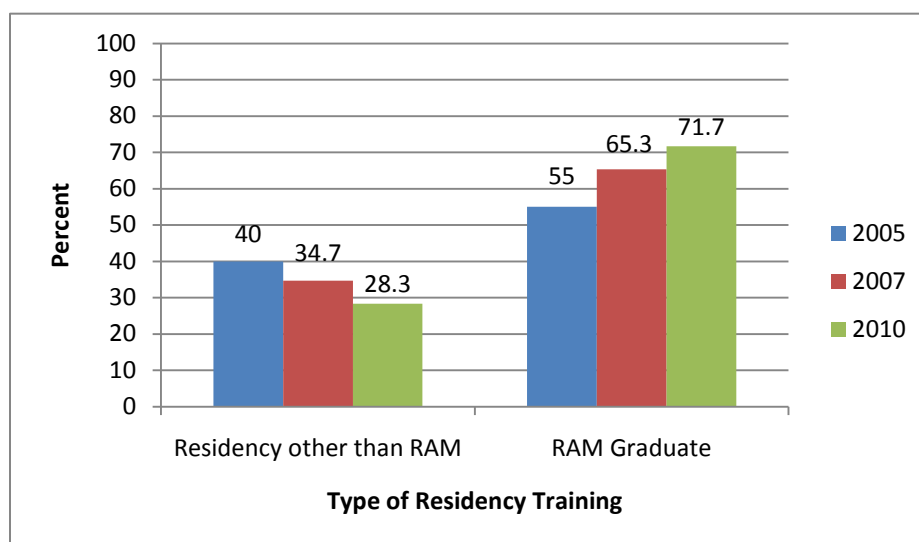


Figure 11. Does the RAM Adequately Prepare Flight Surgeons for SGP and Sq/CC Responsibilities?

The MDG/CCs were asked to review the RAM curriculum and choose the two subject areas that should be emphasized. An “other” category allowed for comment if the commander felt that the subject was not represented in the pick list. The top subject commanders wanted emphasized was clinical aviation medicine at 38.3% (23/60) of responses. The second most prevalent emphasis item was a three-way tie between the Master of Public Health (or equivalent), leadership seminars, and occupational medicine at 28.3% (17/60) each. The “other” category (accounting for only 10% of responses) primarily reflected the newer requirements of PRP oversight and Public Health Emergency Officer (PHEO). The 2007 RAM subject emphasis priorities were leadership and aerospace medicine program management. The 2005 most cited items were leadership and occupational medicine. A verbatim list of the “other” responses is in Appendix C.

In an effort to determine the value of the RAM compared to other residencies in terms of flight medicine management, MDG/CCs were asked which physician they would rather have as

their Flight Medicine Flight commander. The 2010 survey continues to show an increasing trend of favoring the RAM graduate over other residency trained flight physicians (Fig. 12).



**Figure 12. Residency Choice of MDG/CCs for Flight Medicine Commander**

A “catch-all” question asked if there was anything that should be added or deleted from the AMP or RAM programs. There were 20 responses that primarily focused on improving MTF coordination, incorporating lessons on PHEO requirements, and a few other opinions. A verbatim list of these suggestions is in Appendix C.

## 5.0 DISCUSSION

The original intent (from 2003) for conducting this survey was to provide annual feedback regarding the state of the flight surgeon. The difficulty with conducting a survey such as this is differentiating training deficiencies or other modifiable program specifics from systemic Air Force Medical Service issues regarding flight surgeon manning, deployment burden, and the continuously expanding role of the flight surgeon on Air Force installations. In this regard, the author finds the most informative portion of the study to be the comments by the participants. The discussion that follows will review the data but emphasize the additional information that was learned from these inclusive comments.

In terms of overall satisfaction with base level flight surgeons, the majority of commanders are satisfied (69.4%); however, comparison to the previous two studies shows a decrease in the percent with a favorable rating (although not statistically significant). At face value, this may raise concern over the quality of the physicians being recruited or retained into the flight surgeon cadre, but careful analysis of the dissatisfied responses reveals that the quality of physicians is quite good, but the inexperience of newer FSs combined with inadequate mentorship and decreased manning accounted for 68.4% of the negative responses. This is not to make light, however, of the five responses (26% of negative responses) that identified “poor performance” issues. In three of the comments these performance issues were directly attributed to personality characteristics of the individual doctors with whom the MDG/CCs had contact.

The final two comments point to areas that might be modifiable in the training programs. These comments are:

- Problem solving clinical issues that cross squadron lines are not to the degree I expect. The squadron medical elements (SMEs) not assigned to the MTF minimally assist with the waivers within their squadrons.
- Among the youngest FSs, there is still the idea that they should spend a majority of their time flying. I have no problem with FSs doing their job as FSs, but they also have a responsibility to the patients and to the medical organization.

These comments are supported by the additional data reflecting that MDG/CCs would most like to see improvement in FSs in intra-MTF cooperation and leadership/mentorship. Across all three survey years, the consistent desire of MDG/CCs is increased emphasis on intra-MTF cooperation.

The most impressive improvement witnessed in this year's survey is in the area of aerospace medicine program oversight. In the six programs compared, all of them showed a shift toward "good" to "excellent." For three of the six programs (bioenvironmental engineering, optometry, and public health), this shift was statistically significant. None of the six programs were rated as having an overall rating of less than adequate. It is difficult to determine why the trend improved, but it is reasonable to infer that this is due to improved emphasis on program oversight in the training programs or in base level mentorship.

The Aerospace Medicine Primary Course is designed to train physicians on the unique skill set of the flight surgeon. The course is available to any physician or medical student who is medically qualified and approved for the training by his/her commander. The clinical and operational experience levels of the incoming doctors are widely variable, and since the AMP is not designed to be a clinical medicine training course, the AMP graduate may have a vast clinical acumen or may not have even completed medical school. Therefore, MDG/CCs may expect or desire much more from the course than is possible given the constraints of training time, expense, and availability of courses. Furthermore, the time period between graduation from the AMP and the physician filling an active billet as a flight surgeon may be very short (i.e., immediate), as in the case of a general medical officer (GMO), or very long (i.e., several years). That being said, the AMP has undergone two major revisions in the past 5 years, with the latest revision being fielded at the time of this study's administration. These revisions have been due, in part, to feedback solicited in the State of the Flight Surgeon Survey. To gauge the awareness level of MDG/CCs on the changes to the AMP, they were asked if the AMP has been or is being significantly restructured; 65.5% (40/61) reported this awareness. To further educate while administering the survey, the MDG/CCs were given the revised AMP curriculum and were asked to choose the two top subject areas of emphasis for this program; they reiterated that knowledge of aerospace medicine programs and medical standards were the key emphasis items.

As stated in the RESULTS section, there was a significant decline in the percent of MDG/CCs who felt that the AMP adequately prepared physicians to work as flight surgeons. Again, the analysis of the comments section was enlightening: 60% of the negative responses noted that it is not the training in the AMP that is the problem but a need for mentorship at the base level and time to "grow" operational skills. This may speak to a larger manning/FS mentoring gap as opposed to a deficiency in the AMP Course.

Commanders continue to be satisfied with the level of preparation of residents in aerospace medicine needed to fulfill the requirements of the Chief of Aerospace Medicine, and they continue to be dissatisfied with the level of preparation of residents to assume the role of Squadron commander. However, the majority of MDG/CCs do not have an expectation that any residency can teach the leadership and experience that are required of Squadron commanders. This information can be interpreted in a couple of ways: (1) There is no need to change the RAM, as it is meeting its AF goal of preparing graduates for the role of SGP, or (2) The RAM is not meeting its lesser goal of preparing for Squadron command, and the curriculum should be adjusted to emphasize leadership or candidates should be screened for potential leadership abilities prior to matriculation. The interpretation of the correct answer to this question is left to the senior aerospace medicine leadership.

This study is not without limitations. First, the author was challenged with the comparison with previous studies for a few reasons. Previous study data were limited to proportions, with only the study population to use as the “n” in analysis. Since there is no statistical test-of-proportions for more than two proportions, the author was left to calculate 95% confidence intervals and infer significance from nonoverlapping CIs. Many questions lacked a “nonapplicable” or “don’t know” option in previous studies. Therefore, the addition of the category should have improved the quality of data but also made comparisons more difficult. A second limitation to this survey is the lack of demonstrated validity of the questions. None of the State of the Flight Surgeon Surveys has been tested for survey validity and reproducibility. It is recommended that future studies start with a validation of the survey tool. Finally, this is a cross-sectional survey; although we have data from three different years, the population surveyed is different each time as the MDG/CC cycle is only 2 years. Therefore, differences in years should be interpreted with extreme caution as cross-sectional comparison studies do not show causality, just trends.

## **6.0 CONCLUSION**

This survey provides a snapshot of the current opinion of MDG/CCs on the quality of flight surgeons in the USAF as well as the level of preparation of flight surgeons in AF training programs. Caution should be used in making large-scale curriculum changes based on the results of one study, as it is only sampling one of the three main stakeholders (the others being flight surgeons and the line units that the flight surgeons support). For this reason, the current USAF Surgeon General, Lieutenant General Charles B. Green, has requested that the surveys be combined and that one survey be completed and presented once every SG cycle. One recommendation is that the questions for the combined survey be statistically validated over the next year so that further reports will not have an internal validity limitation.

Based on this survey, the author concludes that, overall, MDG/CCs appear to approve of FS oversight of aerospace medicine programs, the Aerospace Medicine Primary Course, and the Residency in Aerospace Medicine training program. When respondents had a negative opinion of one of these programs, the primary reasons cited were lack of experience, inadequate manning, and/or lack of base-level mentorship. These results point to a frustration with the level of manning and an inability to resource time to provide necessary “on-the-job” training in the first years out of the AMP.

## 7.0 REFERENCES

1. Society of USAF Flight Surgeons, "Meeting Minutes of the Society of USAF Flight Surgeons Board of Governors Meeting," Brooks AFB, TX, 29 Sep 2004.
2. Fowler Jr. FJ, "Designing Questions to Be Good Measures," in **Survey Research Methods**, 4<sup>th</sup> ed., Sage Publications, Thousand Oaks, CA, 2009, pp. 87-114.
3. Fowler Jr. FJ, "Nonresponse: Implementing a Sample Design," in **Survey Research Methods**, 4<sup>th</sup> ed., Sage Publications, Thousand Oaks, CA, 2009, pp. 49-68.

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## APPENDIX A

### 2010 State of the Flight Surgeon Survey of MTF Commanders

#### 2010 State of the Flight Surgeon Survey of MTF Commanders

##### Survey Purpose

Leaders within the Flight Surgeon community strive to optimize the service Flight Surgeons provide. It is our expectation that all Flight Surgeons aspire to provide exceptional medical care for Air Force aviation and special duty personnel as well as oversight and management of Aerospace Medicine programs on station and at deployed bases.

As a Medical Group Commander, you can provide vital feedback concerning the effectiveness of your Flight Surgeons as well as valued suggestions to enhance Flight Surgeon education programs.

This survey will evaluate Flight Surgeon effectiveness and generate recommendations for improvement from all current MTF Commanders. Survey results will be collated and then presented and discussed only in aggregate form.

We recognize that as a Commander you face many time demands. We respectfully request that you take 10-15 minutes to complete this survey in order to help improve the service that Flight Surgeons provide.

##### Section 1 - Background

###### 1. The facility that you command, or command within, is a:

- ☐ Medical Center  
☐ Hospital  
☐ Clinic

###### 2. What is your corps?

- ☐ BSC  
☐ DC  
☐ MC  
☐ MSC  
☐ NC

###### 3. What was your primary AFSC prior to your assignment as Commander?

###### 4. Which of the following have you completed? (Select all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Aerospace Medicine Primary Course  | <input type="checkbox"/> AOR deployment   |
| <input type="checkbox"/> Flight Nurse Course  | <input type="checkbox"/> Dental Training  |
| <input type="checkbox"/> Flight Surgeon Assignment  | <input type="checkbox"/> Residency in Aerospace Medicine (RAM)                                    |
| <input type="checkbox"/> MTF Commander Orientation to Aerospace Medicine Course   | <input type="checkbox"/> Bioenvironmental Engineering Course/Public Health Course/Optomety Course |
| <input type="checkbox"/> None of the above (please enter any courses that you have taken for familiarization to Aerospace Medicine) |   |

## 2010 State of the Flight Surgeon Survey of MTF Commanders

**5. How many Flight Surgeons are authorized at your base?**

**6. How many Flight Surgeons are actually assigned at your base?**

**7. Has the Squadron Commander responsible for your Aerospace Medicine Program completed the Residency in Aerospace Medicine (RAM) Program?**

☐ Yes

☐ No

**8. Has the MTF Chief of Aerospace Medicine (SGP) completed the RAM Program?**

☐ Yes

☐ No

**9. Do you have a RAM in a position other than SGP or Aerospace Medicine Sq/CC?**

☐ Don't know

☐ No

☐ Yes (If yes, what position does your RAM hold?)

### Section 2 - Job Skills

**10. What is the optimal rank that you believe the Squadron Commander responsible for the MTF Aerospace Medicine Program should be?**

☐ Captain

☐ Major

☐ Lt Colonel

☐ Colonel

**11. What is the minimum rank that you believe the Squadron Commander responsible for the MTF Aerospace Medicine Program should be?**

☐ Captain

☐ Major

☐ Lt Colonel

☐ Colonel

## 2010 State of the Flight Surgeon Survey of MTF Commanders

**12. What is the optimal rank that you believe the MTF SGP should be?**

- ☐ Captain
- ☐ Major
- ☐ Lt Colonel
- ☐ Colonel

**13. Considered collectively, do the Flight Surgeons in your MTF fulfill your expectations?**

- ☐ Yes
- ☐ No (please comment why not)

**14. How would you describe the relationship that your Flight Surgeons have with these personnel on your installation?**

	Excellent	Good	Adequate	Marginal	Poor
Aircrew	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special Operational Duty (firefighters, Air Traffic Controllers, etc?)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**15. What are the top 2 areas where Flight Surgeons need to improve?**

- ☐ Patient Care/Primary Care Management
- ☐ Flying Squadron/Operational/Wing Engagement
- ☐ Level of MTF cooperation/participation
- ☐ Flightline Response
- ☐ Leadership/Mentorship
- ☐ Knowledge of Aerospace Medicine Programs
- ☐ Other (please specify)

**16. Considering the Flight Surgeons in your Medical Treatment Facility who are NOT serving as a Squadron Commander or SGP, rate the following statements:**

	Significantly better than other AF physicians	Slightly better than other AF physicians	Equal to other AF physicians	Slightly less than other AF physicians	Significantly less than other AF physicians	N/A
Their communication skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their clinical skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their leadership skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 2010 State of the Flight Surgeon Survey of MTF Commanders

**17. Considering the Flight Surgeons in your MTF who ARE serving as a Squadron Commander or SGP, rate the following statements:**

	Significantly better than other AF physicians	Slightly better than other AF physicians	Equal to other AF physicians	Slightly less than other AF physicians	Significantly less than other AF physicians	N/A (I have no Flight Surgeons serving in these roles)
Their communication skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their clinical skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their leadership skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**18. Based on your interactions with the Flight Surgeons at your MTF, how would you rate their ability to provide oversight for the following?**

	Excellent	Good	Adequate	Marginal	Poor	N/A (This program is not managed by Flight Surgeons at this MTF)
Bioenvironmental Engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flight Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupational Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Promotions/Health and Wellness Center (HAWC)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Immunizations Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Readiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optometry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**19. Comparing the RAMs you have served with to other AF physicians, rate the following statements:**

	Significantly better than other AF physicians	Slightly better than other AF physicians	Equal to other AF physicians	Slightly less than other AF physicians	Significantly less than other AF physicians
Their communication skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their clinical skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their leadership skills are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Training - Aerospace Medicine Primary Course

## 2010 State of the Flight Surgeon Survey of MTF Commanders

**20. From your perspective, does the Aerospace Medicine Primary Course adequately prepare physicians to serve as Flight Surgeons?**

- ☐ Don't Know  
☐ Yes  
☐ No (explain why not)

**21. Overall performance by newly graduated (within 1 year) Flight Surgeons from the AMP Course is best categorized as:**

	Excellent	Good	Adequate	Marginal	Poor
Choose the one best answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If Poor or Marginal, Why?

**22. What are the top two subject areas that should be emphasized in the AMP Course Curriculum?**

- |   |  |
|---|--|
| <input type="checkbox"/> Clinical Aviation Medicine                   | <input type="checkbox"/> Emergency Response                    |
| <input type="checkbox"/> Sustainment/Enhancement                      | <input type="checkbox"/> Physiology                            |
| <input type="checkbox"/> Aircraft Mishap Investigation and Prevention | <input type="checkbox"/> Personal Reliability Program (PRP)    |
| <input type="checkbox"/> Information Systems                          | <input type="checkbox"/> USAF Weapon Systems                   |
| <input type="checkbox"/> Public Health                                | <input type="checkbox"/> Bioenvironmental Engineering          |
| <input type="checkbox"/> Deployment                                   | <input type="checkbox"/> Performance                           |
| <input type="checkbox"/> Officership/Leadership                       | <input type="checkbox"/> Aerospace Medicine Programs           |
| <input type="checkbox"/> Hyperbaric Medicine                          | <input type="checkbox"/> Aeromedical Evacuation                |
| <input type="checkbox"/> Occupational Medicine                        | <input type="checkbox"/> General Familiarization with Aviation |
| <input type="checkbox"/> Medical Standards                            |  |
| <input type="checkbox"/> Other (please specify)                       |  |

## 2010 State of the Flight Surgeon Survey of MTF Commanders

**23. Do you know if the Aerospace Medicine Program has been/is being significantly restructured?**

- ☐ Yes  
☐ No

### Training Programs - Residency in Aerospace Medicine

**24. From your perspective as the MDG/CC, the RAM Program should focus on preparing officers to serve as: (choose all that apply)**

- ☐ Squadron Commanders responsible for Aerospace Medicine Programs  
☐ Medical Treatment Facility SGPs  
☐ Flight Medicine Flight Commanders/Clinic OICs  
☐ Other (please specify)

**25. If you had to select one of two Majors, each having successfully completed two Flight Medicine assignments, to serve as your MTF's Flight Medicine Commander/Clinical OIC, who would you select?**

- ☐ The Major who had completed a clinical residency other than the RAM Program  
☐ The Major who had completed the RAM Program

**26. From your perspective, based on your career exposure to RAMs, does the Residency in Aerospace Medicine Program adequately prepare physicians to serve as the MDG SGP?**

- ☐ Don't Know  
☐ Yes  
☐ No (please comment why not)



## 2010 State of the Flight Surgeon Survey of MTF Commanders

**27. From your perspective, based on your career exposure to RAMs, does the Residency in Aerospace Medicine Program adequately prepare physicians to serve as Squadron Commanders?**

- ☐ Don't Know
- ☐ Yes
- ☐ No (please comment on why not)

**28. Below is a list of the current items covered in the 2-year Residency in Aerospace Medicine. What are the top two subject areas that you believe should be emphasized in this RAM Course Curriculum?**

- |  |  |
|--|--|
| <input type="checkbox"/> Master's in Public Health           | <input type="checkbox"/> Civilian Aviation Standards                   |
| <input type="checkbox"/> Space Medicine                      | <input type="checkbox"/> Federal Emergency Management System           |
| <input type="checkbox"/> Hyperbaric Medicine                 | <input type="checkbox"/> Survival Escape Resistance and Evasion (SERE) |
| <input type="checkbox"/> Flight Familiarization              | <input type="checkbox"/> Clinical Aerospace Medicine                   |
| <input type="checkbox"/> Research Project                    | <input type="checkbox"/> SGP Shadow Program                            |
| <input type="checkbox"/> Air Evacuation                      | <input type="checkbox"/> Occupational Medicine                         |
| <input type="checkbox"/> Aerospace Medicine Academics        | <input type="checkbox"/> Leadership Seminar                            |
| <input type="checkbox"/> Mishap Investigation and Prevention |  |
| <input type="checkbox"/> Other (please specify)              |  |

**29. If any, what do you think should be added or deleted from the AMP or RAM Programs?**

### Survey Completed

Thank you for completing the 2010 State of the Flight Surgeon Survey. This information is vital for the continued improvement of Flight Surgeon training and support.

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## **APPENDIX B**

### **IRB Letter**

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## APPENDIX C

### List of Comments

**Considered collectively, do flight surgeons in your MTF fulfill your expectations? (If not, why not?)**

1. Inexperience (9/19)

- The two assigned flight surgeons are general medical officers (GMOs). It is difficult to complete the necessary training at a small clinic. The current RAM did not have experience as a flight surgeon and so he has had to learn a lot and that takes time; unfortunately, at a SUPT base, the operations tempo does not stop long enough for him to catch up.
- They are very junior and prior to my arrival had very little mentorship. Having PRP on top of their flight med duties adds to the importance of them being as proficient as possible in all that they do.
- [Our] other two are newly assigned GMOs, who are motivated but are still in the learning phase. I have no doubt they will eventually grow into outstanding FSs.
- Inexperience with no SGP to provide mentorship/training.
- We have one RAM (LtCol) and four captains, three of which came to us as GMOs without having even completed the AMP Course. The level of experience at our MTF in flight medicine is woefully lacking. It's a foul to staff an MTF with 80% junior captains with minimal to no flight medicine experience.
- Very junior - three on first tour as FSs and SGP on first tour as SGP.
- The two young FSs I have are good officers...but both on first assignment. Both will leave AF because they were abandoned at [unnamed base] with no support...worked their tails off and had no mentor.
- We have a strong RAM, and when she is not deployed, our aerospace medicine program runs well. When she is not around, the AMP FSs really don't have the skill sets to manage all the requirements.
- Very young, inexperienced.

2. Manning (4/19)

- Not manned enough the last 3 yr/overwhelmed by volume.
- They have rotated out too quickly, often leaving several months underlap with one doc left to meet all requirements.
- Without adequate manning, flight doc unable to fulfill 50% of "other" flight physician duties. This was also a repeat HSI finding. Also, with special security clearances, flight doc is unable to fly with local squadron.
- Right now we are making do (with an O-6 RAM filling most of the leadership roles). Two of the other three flight surgeons are deployed—one of whom will transfer upon return...the other of which is a young captain. Our major will separate this summer. As of now, no replacements have been named.

3. Poor performance (4/19)

- Senior FS does not enjoy confidence of the flying community (transferring this summer) and has not stepped up to Flight CC/SGP role.
- Last two have been inept, slow to perform, unwilling or unable to pass physical training standards, uninformed as to PRP, poor communicators, poor leadership abilities.
- Currently we have one FS who was undergoing an Individual Patient Review—same person is now not seeing patients due to MEB, admin action, and suspended license.
- Problem solving clinical issues that cross squadron lines is not to the degree I expect. The SMEs not assigned to the MTF minimally assist with the waivers within their squadrons.
- There is still among the youngest FSs the idea that they should spend a majority of their time flying. I have no problem with FSs doing their job as FSs, but they also have a responsibility to the patients and to the medical organization.

4. Miscellaneous(2/19)

- None assigned, none authorized.
- Sustainment of standards an ongoing challenge; for example, 100% record review done for 1042s with extensive training—to date, no random reviews, SAVs 100%.

**What are the top two areas where flight surgeons need to improve? (If “other,” please describe where flight surgeons need to improve.)**

1. Manning (4/10)

- Our flight docs are engaged in the units, but HSI had a major discrepancy in this area for us. Primary reason is 50% of our four flight docs are deployed at any given time; it's difficult to cover the patient care and operational requirements with 50% manning.
- We really need to be fully staffed in flight medicine (FM). With our seven authorizations (five assigned, if SMEs are included), we are tasked for 720 days of deployment yearly, meaning we really have only three of seven flight surgeons available to run the programs, do shop visits, and provide clinical flight medicine services. This creates an impossible situation with lots of frustration for all involved and seriously affects retention of our flight docs, especially the junior ones.
- Again, I have two great young officers. I need an SGP and two-three more FSs to do the mission at [unidentified base]. So...to answer here, I just need them to reproduce themselves to cover two wings, two doc statements, largest PRP in DoD. Both on first assignment...neither residency trained.
- We are very fortunate in that we have two awesome young FSs that I know nail every area mentioned above. Other than more experience, they are very effective and much appreciated by all. Deployment tempo is a problem as we are consistently at 50% manning.

## 2. Inexperience (3/10)

- Our FM staff will become increasingly junior beginning summer 2010.
- Our flight surgeons all have limited time as an AF officer. Though we have two field grade officers, both came into the AF after a career in the civilian world. Only time can solve this.
- At our base, we get new FSs with little or no experience. In addition to attending the AMP Course, I have worked with the AMDS/CC to develop a 1-year training program to ensure our FSs receive the appropriate training. The MDG has benefitted greatly from our investment in our young FSs.

## 3. Other (3/10)

- As noted, I believe our AMP FSs need to improve their knowledge/skill sets required to execute the aerospace medicine program. Otherwise they are very busy in clinic with primary care/records review and these duties impinge on their abilities to execute requirements outside the MTF.
- None, they are all doing great! I'm happy to have the group I do.
- General comments on training are that they are all (except the SGP) general medical officers with only a 1-year internship and no residency. About their training as flight docs, the academic requirements continue to increase, and when they first come to us they still need to learn both a lot about general outpatient medicine (1-year internships are almost totally inpatient hospital based) and the practice of flight medicine. They are not supposed to be considered fully trained and deployable until they have 1 year of flight med experience, but we often violate that rule and send them out early. In the past they were able to be mentored by the 4Fs who had a great amount of experience in the particulars of flight med, but since the merger with 4Ns this has been lost. In general, I think the initial training they receive in the AMP Course is good, but if not reinforced by immediate practice and mentoring by more experienced docs, it can be forgotten quickly. On-the-job training is a very important part of learning to be a flight doc. Other training opportunities, such as the occupational med course, aircraft mishap course, hyperbaric course, etc., during the first year or so are very important. They often seem to learn more from these once they have some actual experience practicing these. Overall, the new plans to divide the AMP Course into segments, where they learn one area and then have a chance to practice it a little before learning another area, would seem to be a good way of addressing this.

**Does the Aerospace Medicine Primary Course adequately prepare physicians to serve as flight surgeons? (A "no" response required a comment on why preparation was inadequate.)**

## 1. Mentoring/on-the-job training (12/20)

- AMP only provides the basics/terminology—only working in the job with mentorship from a RAM actually prepares them to be flight surgeons.

- It just lays the foundation—much must be learned on the job—which, in our fast-paced PRP operational mission, is difficult and puts much risk into the equation.
- Still required on the job experience to be a good flight doc. We must make sure the new flight docs are going to shops that have the ability to bring them up to speed.
- AMP Course provides a foundation—they need continued mentoring and training.
- I think the AMP Course is a good preparatory course, but it only sets the table to get the flight surgeon started at the first base. The first 6 months are basically an externship that completes the course in my mind. I am concerned that the new course will make the first 6 months of assignment even more critical.
- If they have excellent support staff and a nurse in aerospace medicine when they arrive as new flight surgeons, then they are adequately prepared—if not, it's a real struggle.
- It's a good start, but the only way in my opinion to “grow” flight surgeons is to give them hands-on experience.
- I do believe the AMP provides the basic FS knowledge/skill set, but if there is not a RAM to mentor/lead them at base level, I'm not sure the AMP is adequate to prepare standalone FSs to manage the aerospace medicine program.
- The gaping hole left in flight med when the 4Fs went away has not been incorporated into the flight surgeon's skill set, leaving missions at risk.
- Actually, the answer is a qualified yes. Basic knowledge requirements are sound, so long as young flight surgeons are with more senior guidance as they learn the complexities of the job.
- It is a good start and gives a good large picture. But it doesn't prepare a flight surgeon to take the reins immediately after graduation.
- I think it's a good start; however, those with little to no prior military service are not ready to function independently as an SGP. They need 1-2 years of working with other FSs before being assigned independently. Those with significant prior time in military medicine are more mature and better positioned and prepared to “jump in head first” and start effectively leading all aspects of an aerospace medicine program from the outset.

## 2. Experience—leadership/Air Force/clinical (4/20)

- They are not effective leaders. Like an SGH, they have to get work out of staff that they do not rate/supervise, but I have not seen them effectively manage this leadership task.
- For physicians with prior AF medical experience, yes. For GMOs with no significant prior experience, no.
- Yes, practical experience is lacking, but I understand that they are new to this career field.
- They are well prepared to fulfill their duties as occupational medicine specialists, but their clinical skills are generally behind those of their non-FS peers.

## 3. AMP is inadequate (2/20)

- Too short, too little screening for qualified applicants.
- Adequate only for low-level medical FM issue.

4. Other (2/20)

- It depends on the members and how committed they are to the program.
- I have worked with two RAMs in leadership positions...both were preventive med MDs and both were very poor leaders and unable to see patients. Neither knew the Armed Forces Health Longitudinal Technology Application; neither was safe to see patients.

**What are the top two subject areas that should be emphasized in the AMP Course curriculum?**

- Adequate, only because we continue to instruct them. Without our two RAMs, our captains would be marginal.
- Performance is directly related to personal motivation—I am fortunate; this current group of flight docs is highly motivated and doing great things.
- Leadership.
- Just can't do the job at a base like this.
- NA. We don't have newly assigned flight surgeon.
- The two we have gotten recently have truly been excellent.
- No recent graduates.
- The clinical skills of the 1-year (internship) trained flight surgeons are not to the level of currency and competency for primary care.

**From your perspective, does the RAM program adequately prepare physicians to serve as Squadron commander?**

1. No connection between RAM and Sq/CC OR no expectation (23/36)

- The residency itself does not prepare an individual for Sq/CC—that preparation comes from previous leadership assignments, which is why it's important that AMDS/CC candidates have leadership experience.
- Having completed the RAM program speaks to the caliber of the individuals, but this does not necessarily prepare them for Sq/CC.
- I believe there's still much to be learned with regards to the people/leadership aspect of Sq/CC.
- Certain expectations as Sq/CC that is hard to train for. Some experience in the field could help prior to such an assignment.
- The residency cannot be the only means for preparing RAMs to be Sq/CCs.
- The RAM program's focus is on being able to perform SGP duties, not on leadership.
- I think Sq/CC is a larger leadership responsibility and can't be taught in a residency.
- The assumption that their graduation = preparation to command is no more true than any other residency training.
- It depends on their experience.
- Effective Sq/CCs have leadership skills developed over a career. Class-taught commanders are usually less effective than experienced commanders who have had varied experience in Flight/CC jobs. It doesn't take a doc or RAM to be a good Sq/CC; it

takes a dedicated officer of any training with adequate leadership experience and a passion for ops-driven mission accomplishment. A residency can't provide that.

- It is not designed as leadership training.
- Many who have attended the RAM program have had no leadership experience and thus no foundation to lead a squadron.
- Command is about leadership. This should be independent of graduate medical education training. I would not expect a RAM or any other specialist to be any better of a Sq/CC simply based upon his/her residency training. I've seen good and bad leaders from all residencies.
- RAMs tend to be better officers based on more exposure to line officers, but they do not necessarily have better training or skills for the role.
- There is no association with RAM and leadership.
- Not sure any residency prepares officers to be Sq/CCs.
- I see the RAM as a program to enhance and develop skills required for aerospace medicine, public and occupational health...I don't see it making better leaders. Those that have good leadership skills going in do well when they complete the program...those that don't still don't.
- From what I know, leadership (potential and demonstrated) is not necessarily a factor heavily weighted when selecting from applicants to the RAM. Nor does the RAM curriculum focus on CC skills. More appropriately, I feel that graduating RAMs should serve as an SGP honing their freshly learned RAM skill set before being considered for Sq/CC.
- Not necessarily related.
- This comes with experience and time. There is much to learn in order to be qualified for CC. RAM education is a great start.
- Leadership is something they need to have experience with; they can't just learn it during a course.
- I wouldn't think the purpose of the RAM is to generate Sq/CCs but to generate SGPs.
- The RAM does not teach leadership or most of the information to become successful as a Sq/CC. It does teach how to succeed as an SGP. Sq/CC training comes from years of experience in the field in subordinate level jobs (element leaders, deployments, Flight/CC, and exposure to great mentors who are/were their Sq/CCs).

## 2. Poor officership/leadership (7/36)

- YES for most RAM graduates, but there are some graduates who do not have the leadership or interpersonal skills.
- Not effective leaders/time managers. True in my current assignment and previous three bases where I was in a leadership role with RAM Sq/CCs.
- The residency prepares medical specialists, but it takes time from their careers when mid-level officers are most active with their wing counterparts. RAMs often lack interaction with other squadrons that is required to develop well-rounded lieutenant colonels and colonels. They are an intelligent group, and most overcome this shortcoming quickly, but they are behind the curve coming out of the residency.
- Officer and leadership skills in the two I worked with were some of the worst ever seen.



- Many of the FSs who have graduated from the RAM program have never been an element leader or Flight/CC. Some have had limited exposure to executive staff levels of decision making process. Lack overall leadership abilities. I have noted a difference in the leadership abilities of members who have had this experience/exposure.
- Most lack experience to act in a leadership position. They may be clinically sound but have insufficient knowledge of how the AF works.
- They generally lack good leadership skills because they have never been placed in positions to receive traditional leadership developmental experiences.

3. Limited view (2/36)

- In my experience, the focus of RAMs is strictly aerospace medicine. The majority of squadrons are in clinics that have other components. Most are either unfamiliar or uninterested in how the rest of the squadron functions.
- Limited view/experience outside career field.

4. Other (1/36)

- Not as generic Sq/CCs, since there is little formal coursework dealing with command. They are MUCH more effective AMDS/CCs than non-RAM Sq/CCs.

**What are the top two subjects that you believe should be emphasized in the RAM curriculum?**

- PRP.
- Expert knowledge of all aerospace medicine programs and how they should optimally be managed.
- It seems items like aeromedical evacuation, clinical aerospace med, flight familiarization, and hyperbarics would be emphasized at AMP Course. FEMS needs to be emphasized at some level—of particular interest is the SGP's increased role/responsibility in the disease containment plans and involvement in the emergency operations center.
- More leadership training.
- How aerospace medicine fits into the entire functioning of the MTF, not separate from the MTF.
- Any areas that address previous duties of 4F.

**If anything, what would you add or delete from the AMP or RAM programs?**

1. No comment or don't know (4/20)

- N/A.
- No suggestions.
- No comments.
- Don't know.

2. MTF coordination (3/20)

- Would like to see something added which talks about working together with other parts of the MTF. All too often tend to be too territorial and not work as well as they could with other parts of the MTF.
- Executive committee leadership and participation.
- Officership should be added or additional time spent to help RAMs understand their role in supporting the mission of the MDG.

3. Public health emergency officer (PHEO)/readiness

- Add: SGP support of medical readiness programs.
- National Incident Management System and emergency management are growing as a core area for FSs and RAMs to know. Additionally, PHEO is normally a RAM or other FS function. They have to have a good grasp on both of these areas and right now I'm not sure they are getting it until they get in the field and are put in a position of need (too late).

4. AF familiarization

- Provide more in-depth review of other base unit missions/concerns including MSG and MXG.
- Add: Achieving fitness/performance/nutrition.

5. Other

- Add prep for METLS program.
- I'm not sure anything needs to be added. But certainly emphasis on officership/leadership.

6. General opinions

- Your survey associates SGP with Flight/CC; with new guidance they can't be. They have to work for Group/CC. Even your survey is out of date.
- I think RAMs should complete a tour as SGP/Aerospace Medicine Flight Commander prior to competing for Sq/CC. I think the AMP is a good primary course...would like to see physician assistants and optometrists who are interested have the opportunity to attend and earn "wings"; it gives significant credibility to these individuals who have much to offer the aerospace community and can help significantly with the load of the FS and/or SGP.
- Why have civilian aviation standards?

## **LIST OF ACRONYMS**

AFMS	Air Force Medical Service
AMDS/CC	Aerospace Medicine Squadron commander
AMP	Aerospace Medicine Primary
AOR	area of responsibility
BSC	Biomedical Science Corps
CI	confidence interval
DC	Dental Corps
FEMS	Federal Emergency Management System
FM	flight medicine
FS	flight surgeon
GMO	general medical officer
HSI	Health Services Inspection
IRB	Institutional Review Board
MAJCOM	major command
MC	Medical Corps
MDG/CC	Medical Group commander
MDOS/CC	Medical Operations Squadron commander
MEB	Medcial Evaluation Board
METLS	Mission Essential Task Lists
MSC	Medical Service Corps
MSG	Mission Support Group
MTF	Medical Treatment Facility

MTF/CC	MTF commander
MXG	Maintenance Group
NC	Nurse Corps
PHEO	Public Health Emergency Officer
PRP	Personal Reliability Program
RAM	Residency in Aerospace Medicine
SAV	Staff Assisted Visit
SCN	survey control number
SG	Surgeon General
SGH	Chief of Staff
SGP	Chief of Aerospace Medicine
SME	squadron medical element
SoUSAFFS	Society of U.S. Air Force Flight Surgeons
SUPT	Specialized Undergraduate Pilot Training